



Mathematisches Kolloquium

Am Freitag, dem 30. November 2018 spricht um 14 Uhr c. t. im Hörsaal IV
der Fachrichtung Mathematik (Gebäude E24)

Prof. Dr. Caterina Zeppieri
Universität Münster

über das Thema:

Stochastic homogenization of free-discontinuity problems

Abstract: In this talk I will present a stochastic homogenization result for free-discontinuity functionals. Assuming stationarity for the random volume and surface integrands, we prove the existence of a homogenized random free-discontinuity functional, which is deterministic in the ergodic case. Moreover, by establishing a connection between the deterministic convergence of the functionals at any fixed realization and the pointwise Subadditive Ergodic Theorem by Akcoglou and Krengel, we characterize the limit volume and surface integrands in terms of asymptotic cell formulas. Our qualitative homogenization result extends to the SBV-setting the classical qualitative results by Papanicolaou and Varadhan, Kozlov, and Dal Maso and Modica, which were formulated in the Sobolev setting.

Joint work with F. Cagnetti (Sussex), G. Dal Maso (SISSA), and L. Scardia (Bath)

Der Gast wird von Prof. Dr. Thomas Schuster betreut.

Alle Interessenten sind zum Vortrag herzlich eingeladen.

Kaffee und Tee ab 13.45 Uhr im Klassenzimmer der Mathematik (1. OG, Raum 2.16)

Die Dozenten der Mathematik